

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

~~activating a signal reception sequence for the detected in-band signal, the signal reception sequence including a selective abort sequence that depends upon the determination that the signal is co-channel interference~~

setting an enable restart circuit that responds to a positive in-band power change of the in-band signal and an enable power drop circuit that responds to a negative in-band power change of the in-band signal,

wherein the enable restart circuit and the enable power drop circuit are configured to abort the in-band signal based on inputs to the enable restart circuit and the enable power drop circuit.

2. (Original) The method according to claim 1, wherein processing the received signal includes:

determining a power level of the received signal; and

converting the received signal to a digital signal with a digital packet thereon.

3. (Original) The method according to claim 2, wherein processing the received signal further includes:

performing a quick-drop gain control procedure if the power

level of the received signal is above a saturation limit; and performing a coarse gain drop procedure if the power level of the received signal is within a defined range.

4. (Original) The method according to claim 2, wherein determining the power level includes determining an in-band power level.

5. (Original) The method according to claim 4, wherein determining the in-band power level includes determining a digital packet power of at least a portion of the digital packet.

6. (Original) The method according to claim 5, wherein measuring the digital packet power includes measuring a digital preamble power of at least a portion of a digital preamble of the digital packet.

7. (Original) The method according to claim 4, wherein processing the received signal further includes filtering the digital signal to provide a filtered digital signal with a filtered digital packet thereon.

8. (Original) The method according to claim 7, wherein determining the in-band power level includes determining a filtered digital signal power level of the filtered digital signal.

9. (Original) The method according to claim 8, wherein determining the filtered digital signal power level includes measuring a filtered digital packet power of at least a portion of the filtered digital packet.

10. (Original) The method according to claim 9, wherein measuring the filtered digital packet power includes measuring a filtered digital preamble power of at least a portion of a filtered digital preamble of the filtered digital packet.

11. (Original) The method according to claim 4, wherein detecting the in-band signal includes identifying a drop in receiver gain resulting from a strong in-band power level.

12. (Original) The method according to claim 11, wherein the drop in receiver gain is a quick-drop if the strong in-band power level exceeds a saturation limit.

13. (Original) The method according to claim 11, wherein the drop in receiver gain is a coarse gain drop if the strong in-band power is within a defined range.

14. (Original) The method according to claim 4, wherein detecting the in-band signal includes:
identifying an increase in the in-band power level that is proportional to an increase in the power level; and
recognizing a correlation exceeding correlation thresholds.

15. (Original) The method according to claim 14, wherein the correlation is cross-correlation.

16. (Original) The method according to claim 14, wherein the correlation is self-correlation.

17. (Original) The method according to claim 16, wherein detecting the in-band signal further includes, before the step

of recognizing and after the step of identifying, filling an entire self-correlation viewing window.

18. (Cancelled Herewith)

19. (Currently Amended) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

activating a signal reception sequence for the detected in-band signal, the signal reception sequence including a selective abort sequence ~~The method according to claim 1,~~

wherein the selective abort sequence includes:

aborting the signal reception sequence if a new signal is detected, wherein the new signal is stronger than the detected in-band signal by at least a threshold amount; and

returning to the step of receiving the signal for the new signal.

20. (Currently Amended) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

activating a signal reception sequence for the detected in-

band signal, the signal reception sequence including a selective abort sequence ~~The method according to claim 1,~~

wherein the selective abort sequence includes:

aborting the signal reception sequence if a decrease in an in-band power measurement of the in-band signal exceeds a delta power decrease limit; and
returning to the step of initiating the search sequence.

21. (Currently Amended) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

activating a signal reception sequence for the detected in-band signal, the signal reception sequence including a channel busy suppression ~~The method according to claim 1,~~

wherein the ~~selective abort sequence~~ channel busy suppression includes:

~~aborting the signal reception sequence~~ suppressing a channel busy signal if the in-band signal is determined to include at least one undesirable characteristic; and
returning to the step of initiating the search sequence.

22. (Original) The method according to claim 21, wherein the at least one undesirable characteristic includes one or more of an address and a BSSID.

23. (Currently Amended) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

activating a signal reception sequence for the detected in-band signal, the signal reception sequence including a selective abort sequence ~~The method according to claim 21,~~

wherein ~~the step of~~ aborting is only applied to the inband signal having packets of a designated type data.

24. (Currently Amended) The method according to claim 21, wherein ~~the step of aborting~~ suppressing is applied to the in-band signal regardless of packet type.

25-50. (Cancelled Herewith)

51. (Currently Amended) A system for selectively disregarding signals operating on a common channel, comprising:

a circuit adapted to receive a signal with a packet thereon, and further adapted to convert the signal to a digital signal;

a filter section coupled to the circuit, that includes one or more filters that pass frequency components of the digital signal within a desired band of frequencies to obtain a filtered digital signal;

one or more power detectors coupled to the filter section, for measuring ~~an in-band power of the digital signal and~~ an in-band power of the filtered digital signal; and

control logic configured to execute a signal reception sequence if the in-band power levels of ~~the digital signal and~~ the filtered digital signal exceed one or more threshold values, ~~the signal reception sequence including a selective abort sequence that depends upon the determination that the signal is co-channel interference~~ wherein the control logic includes an enable restart circuit that responds to a positive in-band power change of the filtered digital signal and an enable power drop circuit that responds to a negative in-band power change of the filtered digital signal,

wherein the enable restart circuit and the enable power drop circuit are configured to abort the filtered digital signal based on inputs to the enable restart circuit and the enable power drop circuit.

52. (Original) The system of claim 51, wherein the one or more filters includes a finite impulse filter.

53. (Original) The system of claim 51, wherein the one or more filters includes a decimation filter.

54. (Original) The system of claim 51, wherein the one or more filters includes a low pass filter.

55. (Currently Amended) The system of claim 51, wherein the one or more power detectors include:

a first power detector for measuring the in-band power of the a first filtered digital signal; and

a second power detector for measuring the in-band power of the a second filtered digital signal.

56. (Previously Presented) The system of claim 51, wherein

the control logic includes a means for determining whether the one or more threshold values are exceeded.

57. (Cancelled Herewith)

58. (Cancelled Herewith)

59. (Cancelled Herewith)

60. (Original) The system of claim 51, wherein the control logic includes a means for filtered signal detection that compares the in-band power of the filtered digital signal to a filtered digital signal power threshold value.

61. (Cancelled Herewith)

62. (Currently Amended) The system of claim 51, further including a power storage means for storing the in-band power of the ~~digital signal and the in-band power of the~~ filtered digital signal.

63. (Currently Amended) The system of claim 62, wherein the power storage means is a register configured to store a power profile of at least a portion of a preamble of ~~one or more of the digital signal and the~~ filtered digital signal.

64. (Currently Amended) A system of selectively disregarding co-channel signals in a communications network, the system comprising:

- means for receiving a signal with a packet thereon;
- means for processing the received signal;
- means for detecting an in-band signal from the processed

signal; and

means for activating a signal reception sequence for the detected in-band signal, ~~the signal reception sequence including a selective abort sequence that depends upon the determination that the signal is co-channel interference; and~~

means for selectively responding to positive and negative in-band power changes of the in-band signal, wherein the means for selectively responding is configured to abort the in-band signal based on configurable inputs.

65. (Original) The system according to claim 64, wherein the means for processing the received signal includes:

means for determining a power level of the received signal;
and

means for converting the received signal to a digital signal with a digital packet thereon.

66. (Original) The system according to claim 65, wherein the means for processing the received signal further includes:

means for performing a quick-drop gain control procedure if the power level of the received signal is above a saturation limit; and

means for performing a coarse gain drop procedure if the power level of the received signal is within a defined range.

67. (Original) The system according to claim 65, wherein the means for determining the power level includes a means for determining an in-band power level.

68. (Original) The system according to claim 67, wherein the means for processing the received signal further includes a means for filtering the digital signal to provide a filtered

digital signal with a filtered digital packet thereon.

69. (Original) The system according to claim 67, wherein the means for detecting the in-band signal includes a means for identifying a drop in receiver gain resulting from a strong in-band power level.

70. (Original) The system according to claim 69, wherein the drop in receiver gain is a quick-drop if the strong in-band power level exceeds a saturation limit.

71. (Original) The system according to claim 69, wherein the drop in receiver gain is a coarse gain drop if the strong in-band power is within a defined range.

72. (Original) The system according to claim 67, wherein the means for detecting the in-band signal includes:

means for identifying an increase in the in-band power level that is proportional to an increase in the power level; and

means for recognizing a correlation exceeding correlation thresholds.

73. (Currently Amended) The system according to claim 64, wherein the ~~selective abort sequence~~ means for selectively responding includes:

means for aborting the signal reception sequence if a new signal is detected, wherein the new signal is stronger than the detected in-band signal; and

means for returning to the step of receiving the signal for the new signal.

74. (Currently Amended) The system according to claim 64, wherein the ~~selective abort sequence~~ means for selectively responding includes:

means for aborting the signal reception sequence if a new signal is detected, wherein the new signal is stronger than the detected in-band signal by at least a threshold amount; and

means for returning to the step of receiving the signal for the new signal.

75. (Currently Amended) The system according to claim 64, wherein the ~~selective abort sequence~~ means for selectively responding includes:

means for aborting the signal reception sequence if a decrease in an in-band power measurement of the in-band signal exceeds a delta power decrease limit; and

means for returning to the step of initiating the search sequence.

76. (Currently Amended) The system according to claim 64, wherein the ~~selective abort sequence~~ means for processing includes:

means for ~~aborting the signal reception sequence~~ suppressing a channel busy signal if the in-band signal is determined to have at least one undesirable characteristic; and

means for returning to the step of initiating the search sequence.

77. (Original) The system according to claim 76, wherein the at least one undesirable characteristic includes one or more of an address and a BSSID.

78. (Currently Amended) The system according to claim 76,

wherein the means for aborting is only applied to the in-band signal having packets of predetermined type ~~data~~.

79. (Currently Amended) The system according to claim 76, wherein the means for ~~aborting~~ suppressing is applied to the in-band signal regardless of packet type.

80-88. (Cancelled Herewith)